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EXAMINER
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NGUYEN, HUY TRAM

ART UNIT	PAPER NUMBER
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1709

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/738,385	Applicant(s) BATTEN ET AL.	
	Examiner Huy-Tram Nguyen	Art Unit 1709	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 December 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-82 is/are pending in the application.
- 4a) Of the above claim(s) 50-78 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21 and 22 is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-19, 23-49 and 79-82 is/are rejected.
- 7) ☒ Claim(s) 10-12 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>March 29, 2004</u> . | 6) <input type="checkbox"/> Other: _____  |

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-49 & 79-82, drawn to a grease collection cartridge, classified in class 422, subclass 224.
- II. Claims 50-64, drawn to a cartridge holder assembly, classified in class 210, subclass 138.
- III. Claims 65-78, drawn to method for using the cartridge holder assembly, classified in class 430, subclass 419.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination II has separate utility such as a heater, a grease full sensor, a water full sensor, a pump and a control responsible to the sensors to actuate the valve and the motor. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to

provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Inventions I and III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus can be used to make soap from reactant and pure, unused oils.

Inventions II and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case, the process can be practiced with a materially different cartridge holder assembly or without a cartridge holder assembly.

During a telephone conversation with Mr. Howard A. MacCord, Jr. on June 5, 2007, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-49 and 79-82. Affirmation of this election must be made by applicant in replying to this Office action. Claims 50-68 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a) because they fail to show Figure 9 as stated on **Page 10, Paragraph [0040]** as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If

the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "52" and "56" have both been used to designate cartridge holder assembly. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "56" has been used to designate both cartridge holder assembly and keyway notch. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37

CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: numeral 97 of Figure 2 and numeral 22 of Figures 3A and 5. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities: adding word "pump" next to numeral "38" on Page 9, Paragraph [0037]. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 81 and 82 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 81, the amount of reactant is dependent on "the weight of a volume of oil/grease to be received in the housing." The weight of a volume of oil/grease to be received varies depending upon use of the cartridge and thus the amount of reactant which is based on this variable is indefinite.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 79 is rejected under 35 U.S.C. 102(b) as being anticipated by **Winston (US Patent No. 3,487,439)**.

Regarding Claim 79, Winston reference discloses a cartridge for converting waste oil/grease to a solid suitable for disposal in a landfill (**See Figure 1, numeral 10 -**



Art Unit: 1709

**receptacle)** comprising:

container 11 (housing to receive oil/grease); and  
a reactant in the housing having the property of chemically combining with oil/grease in the housing to form a solid (**See Figure 3, numeral 21 – a body of grease-absorbing material and Column 3, Line 54 – grease has solidified in the receptacle**). **The receptacle of Winston is structurally capable of performing the claimed intended use.**

Claims 1, 9, 13, 23, 27, 28, 35-42, 44, 46, 47, 49, 79 and 80 are rejected under 35 U.S.C. 102(b) as being anticipated by **Morrison (US Patent No. 2,876,082)**.

Regarding Claims 1, 79 and 80, Morrison reference discloses an apparatus (cartridge) for converting waste oil/grease to a solid suitable for disposal in a landfill (**See Figure 1, numeral 1 - housing**) comprising:

mixing bowl 3 (housing having an inlet and to receive oil/grease);  
mixing shafts with mixing paddles 12, 15 (mixing baffle); and  
a alkali reactant placed in the mixing bowl (reactant having the property of chemically combining with oil/grease in the housing to form a solid).

Regarding Claim 9, the mixing paddles are on mixing shafts 9, 10 (main shaft).

Regarding Claim 13, the combination of mixing paddles provides a mixing baffle having openings.

Regarding Claims 23 and 49, the apparatus (cartridge) further comprises housing 1 containing the mixing bowl and which provides a closed boiler chamber around the mixing bowl and inlet for the mixing bowl (hollow cartridge holder assembly with inlet).

Regarding Claim 27, the housing (cartridge holder assembly) includes solenoid valve through which water is passed into the boiler and mixing bowl (inlet valve).

Regarding Claims 28, 35 and 36, the housing (cartridge holder assembly) includes motor 16 which rotates the mixing shafts and a switch 30 (motor and a switch).

Regarding Claims 37-39, the housing (cartridge holder assembly) has hose connection 23 and duct 24 controlled by solenoid valve 25 to receive water (water inlet and solenoid valve).

Regarding Claims 40-42, the housing (cartridge holder assembly) has a heating element 22 in the boiler chamber to heat the water and heat the grease in the mixing bowl (immersion type heater).

Regarding Claims 44 and 46, the housing (cartridge holder assembly) includes a float 35 which raises as the water rises in the boiler to energize the heater and float 32 which deactivates the flow of water when the water reaches a predetermined point (liquid level sensors).

Regarding Claim 47, the housing (cartridge holder assembly) includes a timer 37 (control system) **(See Figures 1-6 and Columns 1-3)**.

Claims 1, 9, 13-15, 23, 25, 28, 32-36, 40, 41, 43, 47-49 and 79-81 are rejected under 35 U.S.C. 102(b) as being anticipated by **JP 7-233399**.

Regarding Claims 1 and 79-81, JP 7-233399 discloses a soap producing apparatus (cartridge) for producing soap from waste edible oil comprising:

reaction container 3 (housing);  
churning equipment 10 (mixing baffle); and  
sodium hydroxide to be fed into the reaction chamber (reactant with the cartridge to solidify oil/grease).

Regarding Claim 9, the churning equipment (mixing baffle) has a shaft (main shaft).

Regarding Claims 13-15, the churning equipment (mixing baffle) has impellers 35 that are open and that each have plates at their top and bottoms at inclination of about 45 degrees to the traveling direction (opening with louvers at their lower edges) (see Figure 5).

Regarding Claims 23 and 25, the apparatus (cartridge) further comprises stand 2 (hollow cartridge holder assembly) holding the reaction container.

Regarding Claims 28, 35, 36 and 47, the stand (cartridge holder assembly) includes a motor 12 which rotates the churning equipment and control panel 23 (motor which rotates the mixing baffle and a switch or control system)

Regarding Claim 32, the stand (cartridge holder assembly) includes a notch 32 to prevent inclining of the reaction container (cartridge locating notch).

Regarding Claims 33 and 34, the stand (cartridge holder assembly) further comprises a pump 22 to pump sodium hydroxide and water into the reaction container

Art Unit: 1709

(pump driven by a motor). Use of the pump to deliver water and grease, as claimed in Claim 34, does not distinguish the structure of the cartridge from that of JP 7-233399.

Regarding Claims 40, 41 and 43, the stand (cartridge holder assembly) has a heating apparatus 4 outside of the reaction container (external heater)

Regarding Claim 48, the control panel controls temperature of the reaction container, lye impregnation, monitors the reaction and has other control and monitors (thus a control system that receives signals to activate the pump and motor) (**see Figures 1-6 and computer translation**).

Claims 1, 9, 19, 23, 25-27, 30, 31, 40, 41, 43-45, 47, 49, 79 and 80 are rejected under 35 U.S.C. 102(b) as being anticipated by **Pope (US Patent No. 4,578,246)**.

Regarding Claims 1, 79 and 80, Pope discloses an apparatus for making soap (grease collection cartridge) comprising:

housing 9 having opening 21 (inlet) for receiving kitchen waste grease;  
mixer blade 54 (mixing baffle) within the housing; and  
soap pack 17 within the apparatus (cartridge) and containing alkali (reactant within the cartridge).

Regarding Claim 9, the mixing baffle has a drive shaft 52 (main shaft).

Regarding Claim 19, the housing has water tank 30 (water impervious inner liner).

Regarding Claims 23, 25, 26 and 49, the apparatus (cartridge) further comprises a fat receptacle 62 for grease (cartridge holder assembly that is hollow and serves as a grease storage tank and has an inlet).

Regarding Claim 27, the receptacle (cartridge holder assembly) includes a valve 57 positioned in a drain line to outlet to the soap mixing tray (inlet valve).

Regarding Claims 30 and 31, the receptacle (cartridge holder assembly) further comprises filter paper 65 mounted above the assembly (oil/grease separator connected to the cartridge holder assembly).

Regarding Claims 40, 41 and 43, the receptacle (cartridge holder assembly) has a heating element 63 mounted thereon (external heater).

Regarding Claims 44 and 45, the receptacle (cartridge holder assembly) can comprise position-sensitive switches to provide information as to which compartment was last filled (liquid level sensors).

Regarding Claim 47, the receptacle (cartridge holder assembly) is under control of the apparatus control system (control system) (**See Figures 1-4 and Columns 2-6**).

Claims 1, 9, 23, 25, 27, 30, 31, 37-41, 43-45, 47, 49, 79 and 80 are rejected under 35 U.S.C. 102(b) as being anticipated by **Pope (US Patent No. 4,578,246)**.

Regarding Claims 1, 79 and 80, Pope discloses an apparatus for making soap (grease collection cartridge) comprising:

soap mixing tray 35 (housing for containing grease and having an inlet for receiving kitchen waste grease);

Art Unit: 1709

mixer blade 54 (mixing baffle) within the housing; and

soap pack 17 for providing alkali to the tray (reactant within the cartridge).

Regarding Claim 9, the mixing baffle has a drive shaft 52 (main shaft).

Regarding Claims 23, 25 and 49, the apparatus (cartridge) further comprises a housing 9 enclosing the soap mixing tray and mixer blade (cartridge holder assembly that is hollow), the housing having an opening 21 to receive grease (oil/grease inlet).

Regarding Claim 27, the housing (cartridge holder assembly) includes valves 33, 41-43 and 57 (inlet valves).

Regarding Claims 28, 35 and 36 the housing (cartridge holder assembly) includes a motor M to rotate the mixing baffle, touch-sensitive actuation buttons and switch 38 (a motor and a switch).

Regarding Claims 30 and 31, the housing opening is overlaid with a filter 22 (oil/grease separator connected to the cartridge holder assembly).

Regarding Claim 37, the housing (cartridge holder assembly) has an opening 18 and water tank 30 to receive water (water inlet)

Regarding Claims 38 and 39, the water tank has a solenoid-type valve 33 (solenoid valve) to control flow of water to the tray in the housing.

Regarding Claims 40, 41 and 43, the housing (cartridge holder assembly) has a heating element 63 mounted therein on the fat receptacle (external heater).

Regarding Claims 44 and 45, the housing (cartridge holder assembly) includes position-sensitive switches with the fat receptacle to provide information as to which compartment was last filled (liquid level sensors).

Regarding Claim 47, the housing (cartridge holder assembly) includes an apparatus control system (control system) **(See Figures 1-4 and Columns 2-6)**.

Claims 1, 3-5, 8, 9, 79 and 80 are rejected under 35 U.S.C. 102(b) as being anticipated by **JP 9-53099**.

Regarding Claims 1, 79 and 80, JP 9-53099 discloses a toy set for preparation of soap (grease collection cartridge) comprising:

container 20 (housing having an inlet);  
stirring means 22 having stirring airfoil 24 within the container (mixing baffle); and  
powder saponification agent to be placed in the container (reactant within the cartridge).

Regarding Claims 3 and 9, the container has a covering device 21 penetrated by the axis 23 (shaft) of the stirring means (lid in which the shaft of the mixing baffle is journaled).

Regarding Claims 4, 5 and 8, the container is cylindrical and the component parts of the toy set are made of plastic material.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 81 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pope (US Patent No 4,578,246) in view of Article entitled "Making Soap with



**James Herhberger, A Chemical Engineer” from Walton Feed, information from the internet, copyright 2000.**

Regarding Claims 81 and 82, Pope discloses the claimed invention except for using sodium hydroxide as the alkali and also using dipropylene glycol as a reactant. The article teaches that it is known to use sodium hydroxide as the alkyl for making soap and using dipropylene glycol as a favorite extender for fragrance oils. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used sodium hydroxide as the alkali and also used dipropylene glycol, as taught by the Article as used for making soap.

Claims 1-7, 13, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Morrison (US Patent No. 2,876,082) in view of Winston (US Patent No. 3,487,439).**

Regarding Claim 1, Morrison discloses a grease collection cartridge for holding kitchen waste grease as a landfill-acceptable solid (**See Figure 1**) comprising:

housing for containing the kitchen waste grease and having an inlet for receiving kitchen waste grease (**See Figure 1, numeral 3**);

a mixing baffle within the housing (See Figure 1, numerals 12 and /or 15)

However, Morrison fails to disclose the reactant within the cartridge to solidify grease and oil. Winston reference teaches that it is known to use a body of grease-absorbing material (21) loosely packed within container (11) for making soaps (**See Column 3, Line 18-20**). It would have been obvious to one having ordinary skill in the

art at the time the invention was made to use the reactant as taught by Winston, since Winston reference states at **Column 3, Line 25-26** that such a modification would accelerate solidification of grease. The grease collection cartridge of Morrison and Winston is structurally capable of performing the claimed intended use.

Regarding Claim 2, Morrison reference discloses the apparatus according to claim 1 including the plunger (**See Figure 1, numeral 30**) except for the reactant within housing and the lid. Winston reference teaches that it is known to use a body of grease absorbing material (21), a lid (22). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the reactant as taught by Winston, since Winston reference states at **Column 3, Line 25-26 and Line 33-35** that such modifications would accelerate solidification of grease and seal the container.

Regarding Claim 3, Morrison and Winston references disclose the apparatus according to claim 1, wherein the housing has a lid with a bearing surface in which a shaft of the mixing baffle is journaled (**See Morrison – Figure 2 – the lid will be located at (4) wherein the shafts (9, 10) are journaled in the center**).

Regarding Claim 4, Morrison reference discloses the apparatus according to claim 1 including the housing being cylindrical (**See Figure 1, numeral 3**) except for the reactant within housing and the housing made from plastic. Winston reference teaches that it is known to use a body of grease absorbing material (21) and the housing made from plastic. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the reactant as taught by Winston, since Winston reference states at **Column 3, Line 25-26 and Line 1-3** that such modifications would

Art Unit: 1709

accelerate solidification of grease and that the housing can be made from plastic material which is impervious to grease and able to withstand the elevated temperature of hot grease.

Regarding Claim 5, Morrison reference discloses the apparatus according to claim 1 including the housing with a base (**See Figure 1, numeral 2**) except for the reactant within housing and the base made from plastic. Winston reference teaches that it is known to use a body of grease absorbing material (21) and the base made from plastic. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the reactant as taught by Winston, since Winston reference states at **Column 3, Line 25-26 and Line 1-3** that such modifications would accelerate solidification of grease and that the apparatus for making soap can be made from plastic material which is impervious to grease and able to withstand the elevated temperature of hot grease.

Regarding Claim 6, Morrison and Winston references disclose the apparatus according to claim 5, wherein the plastic base includes a key on the exterior of the plastic base (**See Figure 1, numeral 5**).

Regarding Claim 7, Morrison reference discloses the apparatus according to claim 6 except for the reactant within housing and the key made from plastic. Winston reference teaches that it is known to use a body of grease absorbing material (21) and the base made from plastic. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the reactant as taught by Winston, since Winston reference states at **Column 3, Line 25-26 and Line 1-3** that such

Art Unit: 1709

modifications would accelerate solidification of grease and that the apparatus for making soap can be made from plastic material which is impervious to grease and able to withstand the elevated temperature of hot grease.

Regarding Claim 9, Morrison and Winston references disclose the apparatus according to claim 1, wherein the mixing baffle has a main shaft (**See Morrison - Figure 1, numerals 9 and 10**).

Regarding Claim 13, Morrison and Winston references disclose the apparatus according to claim 1, wherein the mixing baffle has openings (**See Morrison – Figure 3, the opening spaces between mixing paddles 12 and 15**).

Regarding Claim 19, Morrison reference discloses the apparatus according to claim 1 except for the reactant within housing and the water impervious inner liner. Winston reference teaches that it is known to use a body of grease absorbing material (21) and the side walls being impervious to grease (**See Figure 1, numeral 11 and Column 2, Line 13-14 – grease containing water**). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the reactant as taught by Winston, since Winston reference states at **Column 3, Line 25-26 and Line 1-3** that such modifications would accelerate solidification of grease and that the apparatus for making soap can be made from plastic material which is impervious to grease and able to withstand the elevated temperature of hot grease.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Morrison (US Patent No. 2,876,082) in view of Winston (US Patent No. 3,487,439) and Tunac (US Patent No. 5,075,234).**

Regarding Claim 8, Morrison and Winston references disclose the apparatus according to claim 1 except for the mixing baffle made from plastic. Tunac reference teaches that it is known to use a mixing baffle made from plastic (Figure 7 – dual plastic ball impeller). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the mixing baffle made from plastic as taught by Tunac, since Tunac reference states at **Column 10, Line 33-36** that such modification would be advantageous as an agitation system for shear-sensitive cells.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Morrison (US Patent No. 2,876,082) in view of Winston (US Patent No. 3,487,439) and Chen et al. (US Patent No. 4,737,263).**

Regarding Claim 16, Morrison and Winston references disclose the apparatus according to claim 1 except for the mixing baffle supporting a package of the reactant. Chen et al. reference teaches that it is known to use a mixing baffle with a package of reactant attached to it (See Figure 1, numeral 6 – catalyst bed and numeral 8 – axial support. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the mixing baffle made from plastic as taught by Tunac, since Tunac reference states at **Column 9, Line 63-64** that such modification would effect disengagement of gases on the catalyst.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Morrison (US Patent No. 2,876,082) in view of Winston (US Patent No. 3,487,439), Chen et al. (US Patent No. 4,737,263) and Chambers et al. (US Patent No. 4,988,453).**

Regarding Claim 17, Morrison, Winston and Chen et al. references disclose the apparatus according to claim 16. However, these reference fail to disclose the package being made of a water-soluble material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the water soluble material since it was known in the art that the water soluble/miscible materials and reactant should be used to make soluble soaps (**See Chambers et al. – Column 3, Line 44-46**).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Morrison (US Patent No. 2,876,082) in view of Winston (US Patent No. 3,487,439), Chen et al. (US Patent No. 4,737,263) and Yoshida (US Patent No. 4,555,345).**

Regarding Claim 18, Morrison, Winston and Chen et al. references disclose the apparatus according to claim 16 except for the sodium hydroxide use to turn a volume of grease to be placed in the cartridge into soap. It would have been obvious to one having ordinary skill in the art at the time the invention was made to determine the volume of the grease since it was known in the art that the amount of saponifying agent varies more or less with the amount of the free oils and fats contained in the slurry (**See Yoshida - Column 5, Line 27 and Line 54-66**).

Claims 23-29, 35-42, 47, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Morrison (US Patent No. 2,876,082) in view of Winston (US Patent No. 3,487,439 and Pope (US Patent No. 4,578,246).**

Regarding Claim 23, Morrison and Winston references discloses the apparatus according to claim 1. However, these references fail to disclose the cartridge holder assembly. Pope reference discloses the cartridge holder assembly (See Figure 1, numeral 9). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the grease collection cartridge of Morrison and Winston in place of the soap mixing tray of Pope since it was known in the art that in order to make soap, the cartridge of Morrison and Winston will also need to have storage means to provide the grease and water into the cartridge.

Regarding Claim 24, Morrison and Pope references disclose the apparatus according to claim 23 except for the reactant within housing and the cartridge holder assembly being constructed of rotomolded plastic. Winston reference teaches that it is known to use a body of grease absorbing material (21) and the container made from plastic. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the reactant as taught by Winston, since Winston reference states at **Column 3, Line 25-26 and Line 1-3** that such modifications would accelerate solidification of grease and that the housing can be made from plastic material which is impervious to grease and able to withstand the elevated temperature of hot grease.

Regarding Claim 25, Morrison, Winston and Pope references disclose the apparatus according to claim 23, wherein the cartridge holder assembly is hollow (See

**Pope – Figure 1, numeral 9).**

Regarding Claim 26, Morrison, Winston and Pope references disclose the apparatus according to claim 25, wherein the hollow cartridge assembly serves as a grease storage tank **(See Pope – Figure 2, numeral 62 – a fat receptacle).**

Regarding Claim 27, Morrison, Winston and Pope references disclose the apparatus according to claim 23, wherein the cartridge holder assembly includes an inlet valve **(See Pope – Figure 2, numerals 32 and 61).**

Regarding Claim 28, Morrison, Winston and Pope references disclose the apparatus according to claim 23, wherein the cartridge holder assembly includes a motor and a switch **(See Morrison – Figure 7, numeral– motor and 30 – electronic switch).**

Regarding Claim 29, Morrison, Winston and Pope references disclose the apparatus according to claim 28, wherein the switch is a plunger type switch that closes a electrical circuit when the plunger is depressed and prevents operation of the motor when a collection cartridge is not in place **(See Morrison – Figure 7, numeral 30).**

Regarding Claim 35, Morrison, Winston and Pope references disclose the apparatus according to claim 28, wherein the motor rotates the mixing baffle in the cartridge housing **(See Morrison – Figure 1, numerals 12 and 15).**

Regarding Claim 36, Morrison, Winston and Pope references disclose the apparatus according to claim 35, wherein the motor rotation of the mixing baffle within the cartridge housing mixes grease, water and reactant **(See Morrison, Figure 1 and Column 3, Line 10-39).**



Regarding Claim 37, Winston and Pope references disclose the apparatus according to claim 23, wherein the cartridge holder assembly has a water inlet to allow water into the cartridge holder assembly (**See Pope – Figure 2, numeral 32**).

Regarding Claim 38, Winston and Pope references disclose the apparatus according to claim 37, wherein the water inlet has a solenoid valve (See Pope, numeral 33).

Regarding Claim 39, Winston and Pope references disclose the apparatus according to claim 38, wherein the solenoid valve controls the flow of water through the inlet into the cartridge holder assembly (**See Pope – Column 6, Line 13-20**).

Regarding Claim 40, Winston and Pope references disclose the apparatus according to claim 23, wherein the cartridge holder assembly has a heater (**See Morrison- Figure 6 – boiler**)

Regarding Claim 41, Winston and Pope references disclose the apparatus according to claim 40, wherein the heater provides sufficient heat to keep the grease in liquid form (**See Morrison - Column 3, Line 10-72**).

Regarding Claim 42, Winston and Pope references disclose the apparatus according to claim 41, wherein the heater is an immersion type heater (**See Morrison - Column 3, Line 10-72**).

Regarding Claim 47, Winston and Pope references disclose the apparatus according to claim 23, wherein the cartridge holder assembly further comprises a control system (**See Pope – Column 6, Line 13-20**).

Regarding Claim 49, Winston and Pope references disclose the apparatus

Art Unit: 1709

according to claim 23, wherein the cartridge holder assembly further includes an oil/grease inlet (See Pope – Figure 2, numeral 61).

Claims 80 and 81 rejected under 35 U.S.C. 103(a) as being unpatentable over **Winston (US Patent No. 3,487,439) in view of Yoshida (US Patent No. 4,555,345).**

Regarding Claim 80, Winston reference discloses the claimed invention except to point out the sufficient quantity of the reactant to react with the volume of grease. It would have been obvious to one having ordinary skill in the art at the time the invention was made to determine the volume of the grease since it was known in the art that the amount of saponifying agent varies more or less with the amount of the free oils and fats contained in the slurry (**See Yoshida - Column 5, Line 54-66**).

Regarding Claim 81, Winston reference discloses the claimed invention except for the amount of sodium hydroxide of about 13.2% to about 18.4% of the weight of a volume of oil/grease to be received in the housing. Yoshida reference teaches that it is known to use an amount of 1/30 to 1/100 part by weight of saponifying agent based on the weight of the organic substances present in the slurry waste (**See Column 5, Line 27 – sodium hydroxide and Column 5, Line 48-54 and Column 8, Table 2, 7.8% oil content in forth**). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the amount as taught by Yoshida, since Yoshida reference states at **Column 5, Line 48-54** that such a modification would be desirable to ensure a through conversion of free oils and fats into soap.

Claim 82 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Winston (US Patent No. 3,487,439) in view of Article entitled "Making Soap with James Herhberger, A Chemical Engineer" from Walton Feed, information from the internet, copyright 2000**

Regarding Claim 82, Winston reference discloses the claimed invention except for the dipropylene glycol as a reactant. Feed reference teaches that it is known to use dipropylene glycol as a favorite extender for fragrance oils. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the dipropylene glycol component as taught by Feed, since Feed reference states at Page 3, Paragraph [0004] that such a modification would use to make cosmetics soaps.

***Allowable Subject Matter***

Claims 21 and 22 are allowed.

Claims 10-12 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Art Unit: 1709

Regarding Claims 10-12, the references disclose the apparatus according to claim 9. However, the references fail to teach the main shaft has a "z" shaped cross section. No prior art can be found for this "z" shaped cross section of the main shaft.

Regarding Claim 20, the references disclose the apparatus according to claim 1. However these references fail to teach the housing having an outer wall layer of spiral wound paper tubing. No prior art can be found for the spiral wound paper tubing.

Regarding Claim 21, the references disclose the disposable grease collection cartridge of claim 21 except for the mixing baffle with a "z" shaped main shaft.

Regarding Claim 22, the references disclose the disposable grease collection cartridge of claim 22 except for the mixing baffle with a "z" shaped main shaft and the spiral wound paper tubing.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy-Tram Nguyen whose telephone number is 571-270-3167. The examiner can normally be reached on M - F : 7:30 AM - 5:00 PM (Alternated Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1709

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HTN  
6/20/07

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